

CLAIMS

1. A chip package comprising:

a leadframe including a die attach pad centrally located therein and a plurality of wire bonding pads peripherally located therein;

at least one aperture in the die attach pad;

at least one die formed on the die attach pad;

at least one bonding wire for electrically connecting the die and the wire bonding pads; and

a mold compound for encapsulating the die and the bonding wire to form a chip package, wherein the mold compound is formed in the aperture.

2. The chip package of claim 1, wherein the aperture is formed fully through the die attach pad.

3. The chip package of claim 1, wherein the aperture is formed partially through the die attach pad.

4. The chip package of claim 1, wherein the aperture is formed using a combination of a full etch process and a half etch process.

5. The chip package of claim 1, wherein the shape of the aperture is one of the following: a rectangle, a square, an oval, a triangle, a circle, or a combination thereof.

PATENT

**Express Mail No EL663032045US
Attorney Docket No. 17658
S&L File No. P-24,989-A USA**

6. The chip package of claim 1, wherein the chip package is a leadframe-based Chip Scale Package.

7. The chip package of claim 1, wherein the aperture includes a plurality of apertures formed around the at least one die.

8. The chip package of claim 7, wherein the at least one die includes at least first and second dies, and at least one of the plurality of apertures is disposed between the first and second dies.

9. The chip package of claim 1, wherein the aperture extends horizontally, vertically, or diagonally.

10. A method of providing a chip package, comprising the steps of:
providing a leadframe including a die attach pad centrally located therein and a plurality of wire bonding pads peripherally located therein;
providing at least one aperture in the die attach pad;
providing at least one die on the die attach pad;
providing at least one bonding wire for electrically connecting the die and the wire bonding pads; and
providing a mold compound for encapsulating the die and the bonding wire to form a chip package, wherein the mold compound is formed in the aperture.

PATENT

**Express Mail No EL663032045US
Attorney Docket No. 17658
S&L File No. P-24,989-A USA**

11. The method of claim 10, wherein the step of providing the aperture includes:
forming the aperture fully through the die attach pad.

12. The method of claim 10, wherein the step of providing the aperture includes:
forming the aperture partially through the die attach pad.

5 13. The method of claim 10, wherein the step of providing the aperture includes:
forming the aperture through the die attach pad using a combination of a full etch
process and a half etch process.

14. The method of claim 10, wherein the shape of the aperture is one of the following:
a rectangle, a square, an oval, a triangle, a circle, or a combination thereof.

10 15. The method of claim 10, wherein the chip package is a leadframe-based Chip Scale
Package.

16. The method of claim 10, wherein the aperture includes a plurality of apertures
formed around the at least one die.

15 17. The method of claim 16, wherein the at least one die includes a plurality of dies, and
at least one of the plurality of apertures is disposed between the plurality of dies.

PATENT

Express Mail No EL663032045US
Attorney Docket No. 17658
S&L File No. P-24,989-A USA

18. The method of claim 10, wherein the aperture extends horizontally, vertically, or diagonally.

212004	212005	212006	212007	212008	212009	212010	212011	212012	212013	212014	212015	212016	212017	212018	212019	212020	212021	212022	212023	212024	212025	212026	212027	212028	212029	212030	212031	212032	212033	212034	212035	212036	212037	212038	212039	212040	212041	212042	212043	212044	212045	212046	212047	212048	212049	212050	212051	212052	212053	212054	212055	212056	212057	212058	212059	212060	212061	212062	212063	212064	212065	212066	212067	212068	212069	212070	212071	212072	212073	212074	212075	212076	212077	212078	212079	212080	212081	212082	212083	212084	212085	212086	212087	212088	212089	212090	212091	212092	212093	212094	212095	212096	212097	212098	212099	212100	212101	212102	212103	212104	212105	212106	212107	212108	212109	212110	212111	212112	212113	212114	212115	212116	212117	212118	212119	212120	212121	212122	212123	212124	212125	212126	212127	212128	212129	212130	212131	212132	212133	212134	212135	212136	212137	212138	212139	212140	212141	212142	212143	212144	212145	212146	212147	212148	212149	212150	212151	212152	212153	212154	212155	212156	212157	212158	212159	212160	212161	212162	212163	212164	212165	212166	212167	212168	212169	212170	212171	212172	212173	212174	212175	212176	212177	212178	212179	212180	212181	212182	212183	212184	212185	212186	212187	212188	212189	212190	212191	212192	212193	212194	212195	212196	212197	212198	212199	212200	212201	212202	212203	212204	212205	212206	212207	212208	212209	212210	212211	212212	212213	212214	212215	212216	212217	212218	212219	212220	212221	212222	212223	212224	212225	212226	212227	212228	212229	212230	212231	212232	212233	212234	212235	212236	212237	212238	212239	212240	212241	212242	212243	212244	212245	212246	212247	212248	212249	212250	212251	212252	212253	212254	212255	212256	212257	212258	212259	212260	212261	212262	212263	212264	212265	212266	212267	212268	212269	212270	212271	212272	212273	212274	212275	212276	212277	212278	212279	212280	212281	212282	212283	212284	212285	212286	212287	212288	212289	212290	212291	212292	212293	212294	212295	212296	212297	212298	212299	212300	212301	212302	212303	212304	212305	212306	212307	212308	212309	212310	212311	212312	212313	212314	212315	212316	212317	212318	212319	212320	212321	212322	212323	212324	212325	212326	212327	212328	212329	212330	212331	212332	212333	212334	212335	212336	212337	212338	212339	212340	212341	212342	212343	21234
--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	-------